

## ABSTRACT

A method and apparatus are disclosed for reducing the complexity of reduced state sequence estimation (RSSE) techniques for a given number of states while also reducing the critical path problem. The intersymbol interference due to the less significant tail taps of the channel impulse response is processed with a lower complexity cancellation algorithm using tentative decisions, while the intersymbol interference due to the more significant initial taps is processed with a more complex cancellation algorithm, such as a reduced state sequence estimation technique or an M-algorithm technique. A receiver is disclosed that includes a circuit for processing intersymbol interference due to the less significant tail taps using tentative decisions and an RSSE circuit for processing the intersymbol interference due to the more significant taps.

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